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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,622	06/25/2003	Yutaka Oka	FSF-031381	2391

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EXAMINER

CHEA, THORL

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/602,622

Applicant(s)

OKA ET AL.

Examiner

Thorl Chea

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 13-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-10 and 13-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 06252003
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Okada et al (US Patent No. 5,952,167), Ikari (US Patent No. 6,482,583), Siga et al (US Patent No. 4,332,889) and Toya et al (US Patent No. 5,998,126).

Okada et al disclose a photothermographic substantially as claimed. See columns 22-30, claims 1-18 wherein the material contains a reducible silver source, a photocatalyst, a reducing agent, a binder and a polyhalogen compound of formula (I); column 14, lines 23-39 wherein the photocatalyst include silver iodide and silver bromoiodide. Siga et al in column 6, lines 60-68 discloses a silver iodobromide having molar ratio of silver iodide to silver bromide within the range of 30/70 to 98/2 to provide a heat developable material to have improved spectral sensitivity as well as storage stability. Toya et al in column 16, lines 19-64 discloses silver halide grains having small size for the purpose of minimizing white turbidity after image formation. The grain size is within the range of 10 nm to 80 nm and having silver iodide content from 0.1 to 40 mole %. Ikari discloses the use of claimed compound of formula (1) to provide a photothermographic material with low fog, good photographic performance, even stored at high temperature in high humidity before image formation. See Akari, abstract and column 2, lines 36-41. It would have been obvious to the worker of ordinary skill in the art at

Art Unit: 1752

the time the invention was made to use the mercapto compound taught in Ikari in the material of Ito for same reason as disclosed above, and thereby provide a material as claimed.

Okada et al discloses the use of silver iodide or silver bromide, but fails discloses the compound of formula (1) and the silver halide content having silver iodide content of 10 % to 100 mole % claimed in the present claimed invention, the compound of formula (1) is disclosed in Akari as antifogant and the iodide or silver halide having iodide claimed in the present invention has been known as photocatalyst such as taught in Siga et al and Toya et al. Therefore, it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the antifoggant taught in Ikari and the silver halide having iodide content taught in Toya et al or Siga et al to provide the material of Okada et al with low fog and storage stability, and thereby provide the invention as claimed.

3. Claims 10, 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (US Patent No. 6,376,167). Ito discloses a photothermographic substantially as claimed. See column 19 lines 30-67 which discloses silver halide includes silver iodide having grain size of 10 nm to 80 nm. See column 20 wherein the silver halide may contains ion of metals belong to groups 6-11 such as W, Fe, Co, Ni, Cu, Rh, Pd, Re, Os , Ir, Pt and Au; see also the noble material as chemical sensitizer in column 21, lines 45-67, to column 22, lines 1-11. in column 26, lines 9-14, it is disclose that the metal ions or complex ions may be added several times by dividing the added amount. Siga et al in column 6, lines 60-68 discloses a silver iodobromide having molar ratio of silver iodide to silver bromide within the range of 30/70 to 98/2 to provide a heat developable material to have improved spectral sensitivity as well as storage stability. Toya et al in column 16, lines 19-64 discloses silver halide grains having small size for the purpose of

Art Unit: 1752

minimizing white turbidity after image formation. The grain size is within the range of 10 nm to 80 nm and having silver iodide content from 0.1 to 40 mole %. The silver halide core/shell grains is known in column 16, lines 60-64. See also the chemical sensitizer such as gold, tellurium, selenium and sulfur in column 17, lines 20-53.

Ito may not disclose the pair of metal claimed in the present claimed invention, but discloses in column 20, lines 59-65 that one type of these metal ions may be employed and the same type of the metals or the different type of metals may be employed in combination of two or more types. It would have been obvious to the worker of ordinary skill in the art at the time the invention was known that silver iodide or silver bromoiodide is well known as photocatalyst for silver source taught in Siga or Toya et al with the metal ions taught in Ito including the pair thereof with an expectation of providing a photothermographic material with an increased sensitivity and storage stability, and thereby provide an invention as claimed.

Response to Arguments

4. Applicant's arguments filed January 21, 2005 have been fully considered but they are not persuasive because of the rejection set forth above. The polyhalogenate compound has been conventionally known as antifoggant such as taught in Okada et al, and the metal have been known to use as dopants for silver halide emulsion such as taught in Ito and Toya et al. Therefore, the invention would have been found prima facie obvious to the worker of ordinary skill in the art. The Declaration under 37 CFR 1.132 on January 21, 2005 fails to overcome the rejection set forth above. First, the results presented in the Declaration is irrelevant to the Okada et al. The improvement of fog shown in the Declaration would have expected from the use of the polyhalogenate compound taught in Okada et al. The Declaration with respect to the use of

Art Unit: 1752

the pair of metal is insufficient to overcome the prima facie case of obviousness rejection. First, Declaration fails to provide the amount of the first and second metal presented therein. Thus, it is unclear whether the results are related to the type metal or the amount of metal. Second, the results is not found sufficient significant to be found unexpected by the worker of ordinary skill in the art. The Declaration also fails to provide a clear explanation as to why such results would have found significant to the worker of ordinary skill in the art at the time the invention was made.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

Art Unit: 1752

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tchea 
June 6, 2005


Thorl Chea
Primary Examiner
Art Unit 1752